REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 12-22 are presently active in this case, Claims 12, 14, 17, and 19-22 having been amended by way of the present Amendment.

In the outstanding Official Action, the specification was objected to as containing numerous grammatical mistakes. However, the Official Action does not specifically identify any of the supposed grammatical mistakes. The specification has been thoroughly reviewed and minor stylistic changes have been made to the specification in order to make the specification slightly easier to read. However, the Applicant respectfully traverses the requirement to submit a substitute specification absent specific indication of the numerous grammatical errors supposedly present within the specification. The Applicant submits that the specification is in proper form and respectfully requests the withdrawal of the objection to the specification.

The V. Perez-Mendez et al. reference listed in the Information Disclosure Statement filed on January 15, 2002, has been resubmitted herewith for consideration by the Examiner. The Information Disclosure Statement filed herewith indicates that the V. Perez-Mendez et al. reference has a publication date of 1974 (as is indicated on page 17, line 19, of the specification), which is significantly prior to the filing date of the present application.

Claims 22 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Official Action indicates that the process of manufacturing the detector is unclear and that "[t]he examiner assumes that the 'layer' includes half-tracks and

half semiconducting material, and sheets stacked on top of each other." The Applicant submits that the examiner's assumption is not accurate. Claim 22 recites a process in which half of a layer is formed on two opposing faces of two successive sheets, and then a group of tracks are formed on one of the half layers. The sheets are then assembled together. By way of explanation and not limitation, this process would provide a first sheet having two half-layers on opposite faces and a group of tracks on one of those half-layers, which is then joined to a second sheet having two half-layers on opposite faces, thereby sandwiching the group of tracks between one half-layer of the first sheet and one half-layer of the second sheet. (See page 16, lines 12-21, of the specification.) The Applicant respectfully submits that the language of Claim 22 is definite under 35 U.S.C. 112, second paragraph. Accordingly, the Applicant requests the withdrawal of the indefiniteness rejection.

Claims 12-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (U.S. Patent No. 4,937,453) in view of Parker (U.S. Patent No. 5,889,313). For the reasons discussed below, the Applicant requests the withdrawal of the obviousness rejection.

The Applicant submits that a *prima facie* case of obviousness as defined in MPEP 2143 cannot be established in the present case because the references, either taken singularly or in combination, do not teach or suggest all of the claim limitations.

Claim 1 of the present application recites a two-dimensional detector of incident ionizing radiation composed of first particles, comprising a stack of sheets of a first material configured to emit second particles by interaction with the incident ionizing radiation. The detector further comprises layers of a semiconducting material that alternate with the sheets of the first material and that are able to be ionized by the second particles, where each of the layers are associated with one of the sheets. The stack has opposite first and second faces

each including corresponding edges of the sheets and layers. The detector is configured to be laid out such that the ionizing radiation arrives on the first face. A length of each sheet measured from the first face as far as the second face being equal to at least one tenth of a free average path of the first particles in the first material. Groups of parallel and electrically conducting tracks extend from the first face to the second face parallel to the layers, where each group is associated with one of the layers and in contact with said one of the layers. The tracks are designed to collect charge carriers that are generated in the layers by interaction of the layers with at least one of the second particles and the first particles and that are representative of the first particles in intensity and in position. The detector further comprises means for creating an electric field capable of causing collection of charge carriers through the tracks. The first material is defined as a different material than a material used to form the layers of semiconducting material.

The Official Action notes that the Nelson reference does not disclose a detector having alternating sheets and layers. The Applicant agrees with this assessment. The Nelson reference merely describes aluminum strips (12) provided in a silicon substrate (10). There are no structures provided within the detector of the Nelson apparatus that can be defined as a layer of semiconducting material and a sheet of a first material. Claim 1 has been amended to clarify that the first material is defined as a different material than a material used to form the layers of semiconducting material, thereby accentuating the differences between the present invention and the detector described in the Nelson reference.

The Applicant submits that the Parker reference also does not teach or suggest a detector having alternating sheets and layers where the first material of the sheets is defined as a different material than a material used to form the layers of semiconducting material.

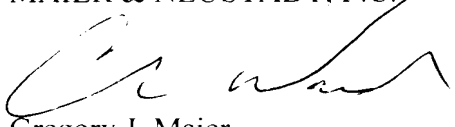
Accordingly, since neither of the cited references teaches such a feature, then the Applicant respectfully requests the withdrawal of the obviousness rejection.

Claims 13-22 are considered allowable for the reasons advanced for Claim 12 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 12.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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